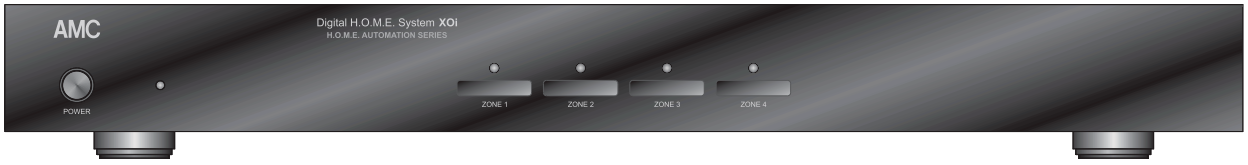
AMC XOi

4 ZONE 4 Local/4 Remote Mixed SOURCE DIGITAL H.O.H.E SYSTEM

with Remote Sources

AMC™ IA

AMC IA PRODUCTS WITH 25 YEAR LIFE USING MODULE CONCEPT



INSTRUCTIONS FOR INSTALLATION AND OPERATION

CAUTION
RISK OF ELECTRIC SHOCK DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL

ATTENTION:
RISQUE DE CHOC ELECTRIQUE N OUVRIR PAS

AFIN DEVITER UN CHOC ELECTRIQUE ET LES CONSEQUENCES GRAVES QUI POURRAIENT EN RESULTER, TENTEZ PAS D'OUVRIR L'APPAREIL ET DE TOUCHER AUX COMPOSANTS INTERNES SANS LA PRESENCE D'UNE PERSONNE QUALIFIEE.

PRECAUCION:
RIE SGO DE ELECTROCHOQUE NO ABRIR LA TAPA

PARA REDUCIR EL RIESGO DE SACUDIDAS ELECTRICAS, NO DEBERA QUITARSE LA TAPA (NI PARTE POSTERIOR). CONSULTESE AL PERSONAL CAPACITADO PARA LAS REPARACIONES INTERNAS.

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.
ADVERTENICIA: PARA EVITAR EL RIESGO DE INCENDIO O SACUDIDA ELECTRICA, NO DEBERA EXPONERSE ESTE APARATO A LA LLUVIA O HUMEDAD.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARISED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE..

ATTENTION: POUR PREVENIR LES CHOCS ELECTRIQUES NE PAS UTILISER CETTE FICHE POLARISEE AVEC UN PROLONGATEUR. UNE PRISE DE COURANT OU UNE AUTRE SORTIE DE COURANT, SAUF SILES LAMES PEUVENT ETRE INSEREES A FOND SANS EN LAISSER AUCuNE PARTIE FOND SANS EN LAISSER AUCUNE PARTIE A DECOUVERT.

PRECAUCION: PARA EVITAR SACUDIDAS ELECTRICAS, NO DEBERA UTILIZARSE ESTA ÇLAVIJA POLARIZADA CON UN CORDON DE PROLONGACION, RECEPTACULO U OTRO TIPO DE SALIDA A MENOS QUE SE HAYAN INSERTASO COMPLETAMENTE LAS LENGÜETAS PARA EVITAR SU EXPOSICION.

NOTE: Some AMC products are equipped with dual or multi-voltage transformers (which is indicated on the back panel). If you wish to change the voltage, please bring your unit to an authorised AMC service technician for internal conversion.

ATTENTION: Quelques pièces AMC sont munies de transformateurs à double ou à multi-voltage (indiqué au panneau arrière). Si vous voulez changer le voltage, veuillez apporter votre appareil au fournisseur de AMC pour le transformer.

ZUR BEACHTUNG: Einige AMC Geräte sind mit Umschaltern für unterschiedliche Netzspannungern ausgerüstet (Ein Vermerk auf der Rückseite weist darauf hin).

Die Anpassung, wenn notwendig, muß von einem qualifizieren Techniker in einer AMC Servicestation vorgenommen werden.

NOTA: Ciertos componentes de AMC están dotados de transformadores de doble tensión o de varias tensiones (lo que se indica en el panel posterior). Si se desea cambiar la tensión, sírvanse llevar el aparato a un técnico autorizado por AMC para su conversión interna.

NOTE TO CATV systems installer: This reminder is provided to call the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

NOTA PARA EL INSTALADOR DE ANTENAS DE TELEVISION COLECTIVAS: La presente advertencia se provee para llamar la atención del instalador al Artículo 820-22 de NEC (Córdigo Eléctrico Nacional) donde se facilitan las directrices para la pertinente puesta a tierra y que especifica en particular que el condutor a tierra del cable debe connectarse al sistema de conexión a tierra del edificio, lo más proximo posible al punto de entrada del cable.

The lightning flash with arrowhead, within an equilateral triangle, is intended to alert the user of the presence of uninsulated" dangerous voltage" within the product's enclosure; that may be of sufficient magnitude to constitute a risk of electric shock to persons.

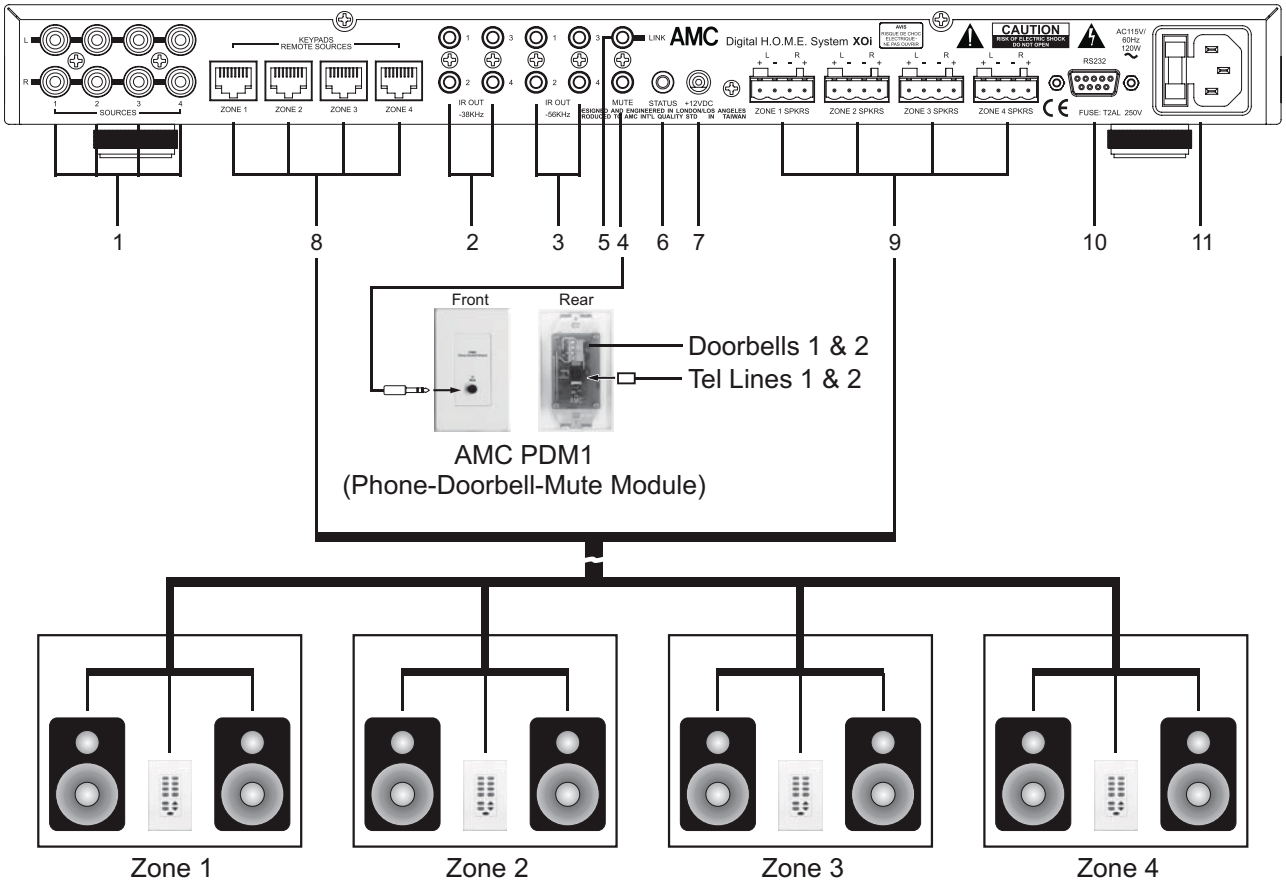
The exclamation point within an equilateral triangle is intended to alert the user of the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

APPLICATION AND FEATURE LIST

Features of the AMC$_{TM}$ model XOi

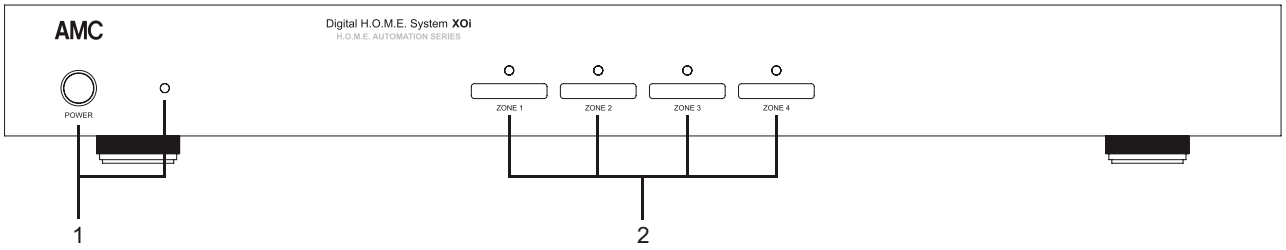
* System for total 4 Zones
* System with 8 Sources – 4 Local / 4 Remote mixed Sources.
* Only RJ45 & Speaker Wires used for installations from XOi main unit to all zones
* Two ways AMC propriotary Digital Data Communication System between XOi main unit and keypads in all zones
* Designed with cascade feature for keypad XK1
* Volume Control & Tone Control for each Zone
* Four 38KHz and four 56KHz IR outputs on rear panel of XOi main unit
* Doorbell and telephone mute system (PDM1) - option
* With RS232 to digital link with other systems - option
* IR remote control receiver on each zone for controlling XOi main unit and remote Sources in other zones
* RCA, 3.5mm mini jack and RJ45 Remote Source input jacks in each Zone
* Low profile 1U
* Power of each channel / zone : 15W x 2 Digital Amplifiers for each Zone.
* The XOi package contains:
    - 1 XOi main unit
    - 4 IRE1 IR emitters with feedback LED
    - 1 Remote Control Handset
    - 1 This Manual
    - 1 Zone description labels
* Options : XK1, XS1, XU1, PDM1 (numbers of XK1, XS1, XU1, PDM1 required based on each installation designs)

REAR PANEL CONNECTIONS/FRONT PANEL CONTROLS



1. Local Source Inputs 1~4
2. IR Out - 38KHz
3. IR Out - 56KHz
4. Mute
5. Link
6. Status
7. 12VDC
8. Keypads & Remote Sources
9. Speaker Terminals
10. RS232
11. AC input receptacle with Fuse

FRONT PANEL



1. Power Switch (Standby / Off) & Blue LED
2. Zone LED & 4 square Recesses

REAR PANEL CONNECTIONS

1. Local Source Inputs 1~4
Each of these stereo RCA inputs receives an audio signal from up to four independent audio sources.
Remarks: There are other 4 Remote sources from Zone 1~4 as Remote Source Inputs R5 to R8 can be selected by all zones.
Remote Source R5 is located at XS1 of Zone 1, Remote Source R6 is located at XS1 of Zone 2, Remote Source R7 is located at XS1 of Zone 3 and Remote Source R8 is located at XS1 of Zone 4. Signals of R5 are mixed with signals of Local Source 1, Signals of R6 are mixed with signals of Local Source 2, Signals of R7 are mixed with signals of Local Source 3 and Signals of R8 are mixed with signals of Local Source 4. Users can connect Source unit to one of the two mixed source inputs or connect two Source units to both Local and Remote Source Inputs. When users connect two Source units to both Local and Remote Source Inputs, users can play each source separately or play both sources at the same time with signals of the two sources mixed together.

2. IR Out - 38KHz
For most Audio Sources

3. IR Out - 56KHz
For cable and satellite boxes

4. Mute
This 3.5mm non-shorting Stereo connector (Power, Mute, Gnd) is designed to be used in conjunction with the AMC PDM1 (Phone-Doorbell-Mute Module) - This is an option feature.

5. Link
This 3.5mm mono connection is used to expand the AMC XOi from four to eight zones. - This is an option feature.

6. Status
This 3.5mm mono connection provides a +12VDC output when a zone is turned on. This can be used to trigger external equipments.

7. 12VDC
For supplying 12VDC to external modules. (total 1A max)

8. Keypads & Remote Sources

9. Speaker Terminals

10. RS232
This is used for making interface with other system and for factory purposes. - This is an option feature.

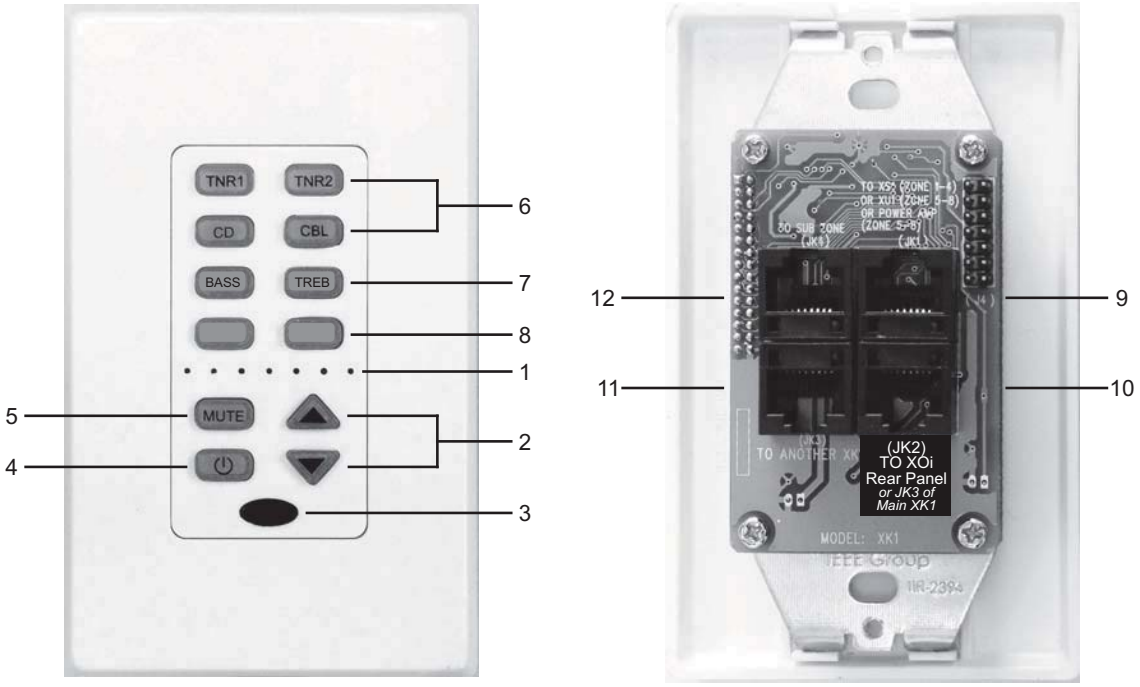
11. AC input receptacle with Fuse

FRONT PANEL CONTROLS

1. Power Switch (Standby / Off) & Blue LED
The Power Switch turns AMC XOi "Standby" or "Off"
The Blue LED will be lit up during "Standby", will be turned off during "Off"

2. Zone LED & 4 square Recesses
Each of these LEDs indicates, when lit, that its zone keypads are turned on.
The 4 square recesses are for putting labels of names of all zones

KEYPAD (XK1 for Zone 1 to 4)



1. LED's of Volume Level of the zone
Volume-only one LED will be lighted up. (for energy saving purposes)

2. Volume up▲ / down▼

3. IR Receiver
Each keypad has an IR receiver for controlling the Local and Remote source equipments.

4. Power
The power button turns the keypad's zone on and off independently.

5. Mute
The mute button temporarily mutes any audio playing in that keypad's zone.

6. Source Selection
The 4 source buttons independently select any of the four local sources (Source 1 to 4) connected to the rear panel of AMC XOi main unit and four Remote Sources (Source R5 to R8) connected to the XS1 of Zone 1 to 4. (R5 located at Zone 1, R6 located at Zone 2, R7 located at Zone 3 and R8 located at Zone 4) The selected source button will remain lit.

7. BASS and TREB
Please see details in Section "EQ Control and Source Grouping" on page 12.

8. Not Used
They were made provisions for other models.

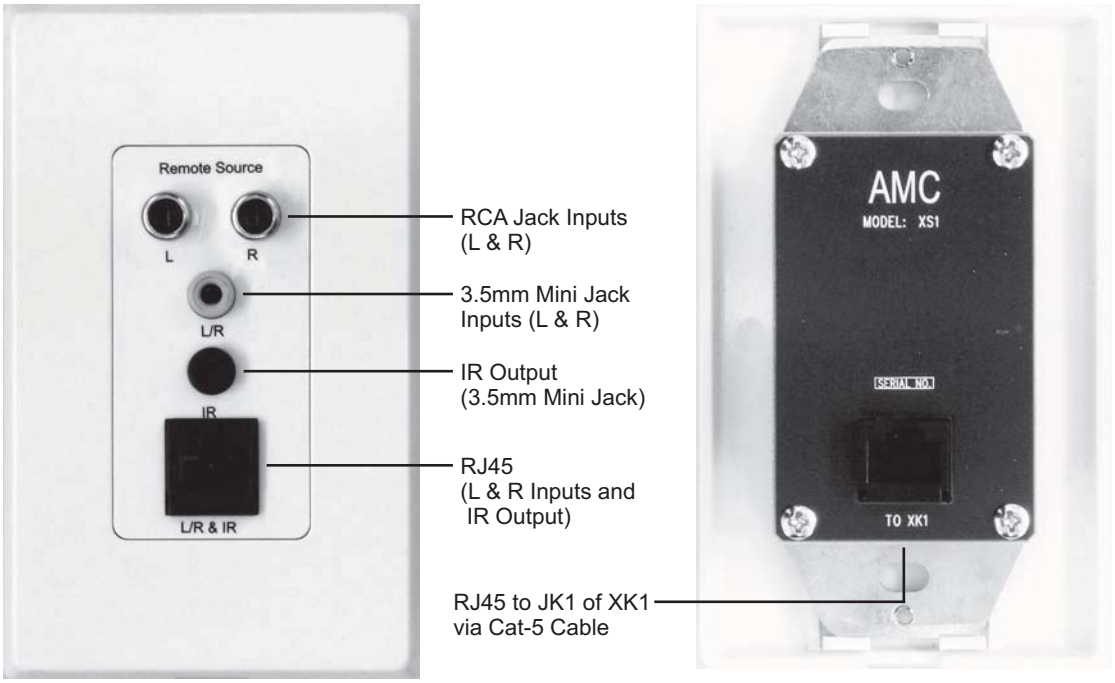
9. JK1 (RJ45) (to XS1) (Zone 1~4) or XU1 (Zone 5~8) or Power Amp (Zone 5~8)
For Zone 1~4, please use Cat-5 cable to connect from the JK1 of XK1 to the RJ45 connector on the rear side of XS1 for hooking to Remote Sources R5 (located at Zone 1), R6 (located at Zone 2), R7 (located at Zone 3) and R8 (located at Zone 4).

10. JK2 (RJ45) (TO XOi Rear Panel)
Use Cat-5 cable to connect from the JK2 of XK1 to RJ45 of specific Zone on XOi Rear Panel (or JK3 of Main XK1 - option)

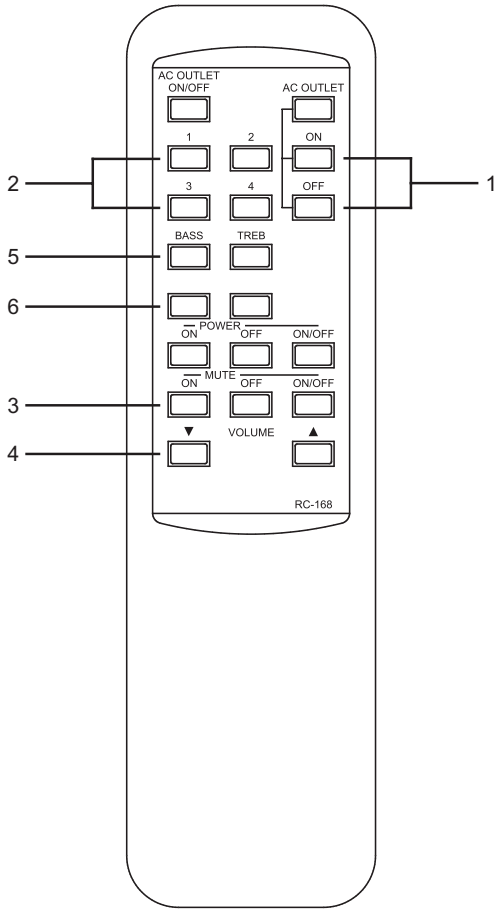
11. JK3 (RJ45) (To Another XK1)
Use Cat-5 cable to connect from the JK3 of XK1 to JK2 of Another XK1. - This is an option feature.

12. JK4 (RJ45) (To SUB ZONE)
Use Cat-5 cable to connect from the JK4 of XK1 to main-in of amplifiers or power speakers. - This is an option feature.

REMOTE SOURCE XS1 (for Zone 1 to 4)



REMOTE CONTROL



1. Power On & Off
This button turns the zone on and off and powers all the zones off when it is pressed and held.

2. Source Selection
The 4 source buttons independently select any of the four local sources (Source 1 to 4) connected to the rear panel of AMC XOi main unit and four Remote Sources (Source R5 to R8) connected to the XS1 of Zone 1 to 4. (R5 located at Zone 1, R6 located at Zone 2, R7 located at Zone 3 and R8 located at Zone 4) The selected source button will remain lit.

3. Mute & Mute On & Mute Off
"Mute" button mutes the zone in the same way as the keypad mute button. "Mute On" and "Mute off" turn the mute "On" or "Off"

4. Volume
Perform the same function as the volume button on the zone keypads. The volume level indicator on the keypad will respond correspondingly to the volume command from the remote control.

5. EQ Control
To change bass response, press BASS button once. Adjust bass level up or down by using Volume Up and Volume Down buttons. Once the designed setting is made, press BASS button again to resume normal operation.
To change treble response, press TREB button once. Using the same process as above. Once the designed setting is made, press TREB button again to resume normal operation.

6. Not used in this model.

7. The remote control is basically with the same functions of keys as AMC S84

INSTALLING THE XOi DIGITAL HOME SYSTEM

1. Prewire

The XOi uses Cat-5 cable for keypad control and either two- or four-conductor 16-gauge speaker wire. All the wire is "homerun" from each zone to the XOi.

2. The XOi digital home systems require Cat-5, unshielded, twisted pair (UTP), for communication between the keypads/display pads and the main XOi unit. Each end of the wire is terminated with an RJ45 connector.

The XOi system can accommodate 500 total feet of Cat-5 cable for each zone. For the most reliable operation, it is best that no single run of Cat-5 exceeds 250 feet.

The correct wiring scheme for the Cat-5 cable is standard EIA/TIA 568A. Properly terminating the Cat-5 cable is crucial for the operation of the system. It is very important to use a good quality crimp tool, and testing each end to end run with Cat-5 wire tester will insure that your system operate flawlessly, Fig. 1.

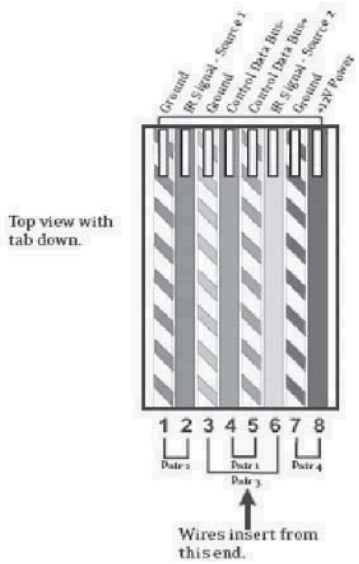


Fig.1: EIA 568A wiring scheme for Cat-5 Cable

Pin #
1. Green Stripe
2. Green
3. Orange Stripe
4. Blue
5. Blue Stripe
6. Orange
7. Brown Stripe
8. Brown

Note: Colors listed as "stripe" are a white wire with a colored stripe.

Step-by-Step Crimping instructions

Step1 Strip a 2 to 3 inches portion of the insulation, exposing the 4 twisted pairs.

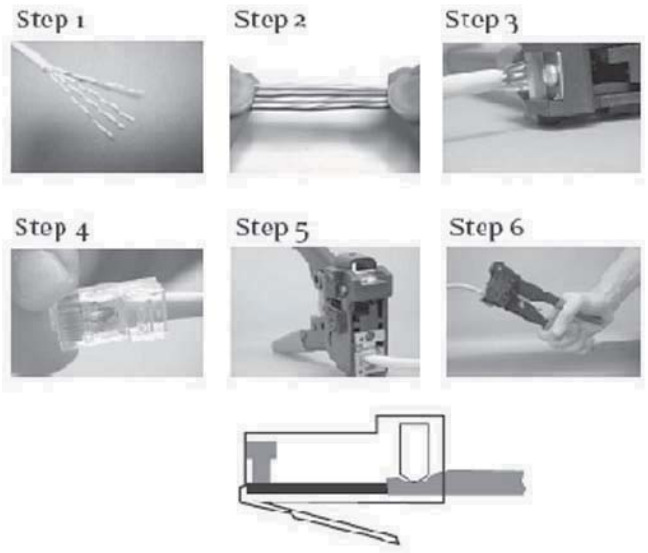
Step2 Untwist the wires and fan them out individually. Arrange the wires into the correct color scheme as shown in Fig.1

Step3 Flatten the wires in their correct order, and trim them evenly across the top. Most crimp tools have a wire trimmer built-in. It is best to trim the wires to about 1/2" in length.

Step4 While holding the wires flat between your thumb and forefinger, insert the wires into the RJ45 connector, so each is its own slot. Push the wire into the RJ45, so all 8 conductors touch the end of the connector. The insulation jacket should extend beyond the crimp point of the RJ45.

Step5 Insert the RJ45 into the crimp tool receptacle and squeeze the tool firmly. Note that a ratchet type tool should tighten down until it no longer clicks.

Step6 The RJ45 should be firmly crimped to the Cat-5 insulation. It is necessary that the color scheme be repeated identically on each end of the wire.



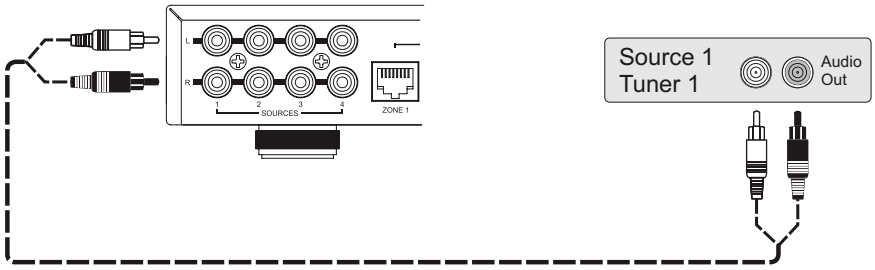
3. Speaker Wire Termination at XOi

It is important to keep the proper orientation of positive and negative signal for each speaker connection. Typically, two-conductor speaker wire uses red to denote positive and black to denote negative. Some types of wire indicate positive with dark line running through the insulation. Four-conductor wire can also be used. This has four separated wires in one outer jacket, making it possible to run a single speaker wire to a zone for its pair of speakers. This type of wire typically uses red and black for one speaker and white as positive and green as negative for the second speaker.

4. Installing the XOi

The XOi is designed to be placed on a shelf or in a component rack. If you are mounting the XOi with other components,you should remove the feet.

The audio sources are plugged into the four local source inputs on the back panel of the XOi using stereo RCA cables, Fig.4



5. IR Outputs

The XOi system ships with four IRE1 IR Emitters for transferring IR data from the keypad receivers (located under the volume button) to the IR receiver on each piece of source equipment. There are two separated IR output sections on the back panel. The 38KHz outputs are used for most audio sources. The exception to this is cable and satellite boxes, which operate at a higher IR carrier frequency closer to 56Khz.It is important that the output being used for each source matches the source input number. The outputs work individually with each source to allow independent source control. Simply plug the IRE1 IR emitter into the appropriate IR output on the back of the XOi and attach the flasher end over the IR receiver of the source equipment, fig. 5

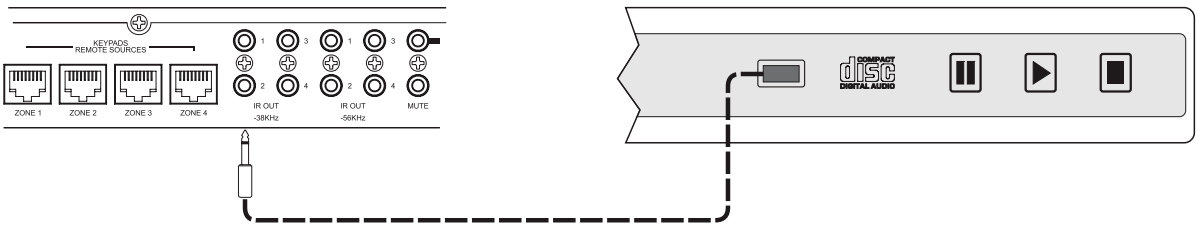


Fig. 5

6. Keypad XK1 and Zone Setup

The Zone number each keypad XK1 belonging to is decided by which RJ45 connector each keypad connected through Cat-5 cable from JK2 of XK1 to XOi.

EQ Control and Source Grouping

The keypads can be used to set specific zone functions. These are for bass and treble EQ response and source grouping. To change bass response, press the BASS button . Adjust the bass level up or down by using the Volume Up and Volume Down buttons. Press BASS button again to return the keypad to normal operation. The Volume indicator LEDs will indicate the output level, Fig. 7. Adjust treble response by using the same process. This is accessed by pressing the TREB buttons. Once the desired setting is made, press TREB button again to return the keypad to normal operation.

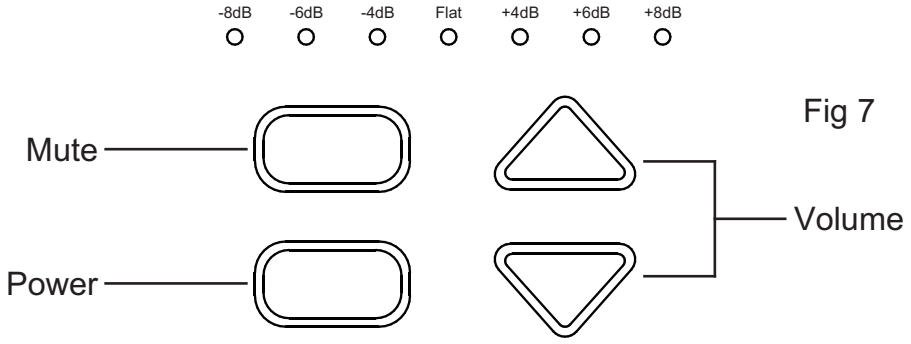


Fig 7

Source grouping is a feature that allows multiple zones in an open living space to always share the same source selection but still retain individual volume and on/off control.

To get into group mode - press and hold any Source (1-4) button until all of the volume LEDs light. All of the other zones should change to the same source. Changing sources in any zone will change all zone sources.

When in group mode - selecting MUTE should mute all zones. Press MUTE again will take all zones out of mute.

When in group mode - Power OFF will turn all zones off and take the XOi out of group mode.

To leave group mode - press and hold any Source (1-4) button again utill all of the volume LEDs light.

The XOi system keypads automatically memorize the listening volume when all zones have been turned off and a zone is turned on again.

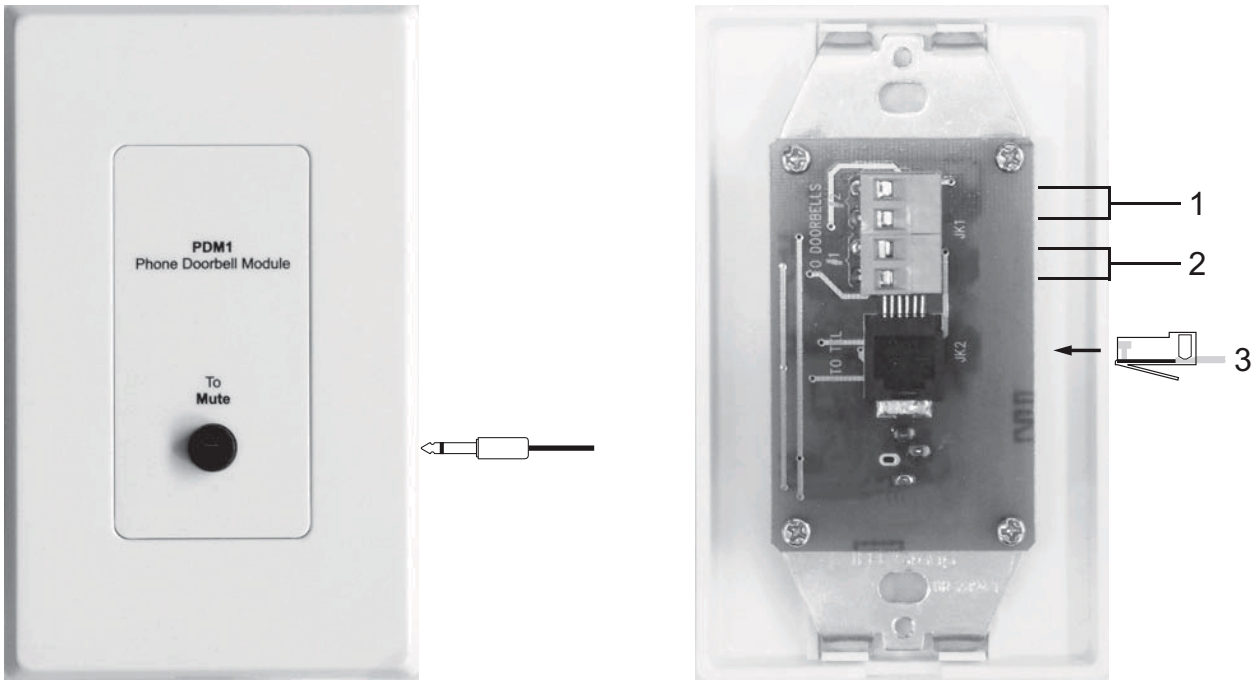
7. Using the Link Jack to create Eight Zones (This is an optional feature)

Two XOi can be made to react as one using the back-panel 3.5mm connection labeled "Link". This requires the use of "Y" cables to link the source inputs and IR outputs. A single mono mini-patch cable is then plugged into the "Link" jack on both XOi. This links the All Off command so when it is initiated at any of the zone keypads, all eight zones will turn off.

8. Mute Input and the AMC PDM1 (Phone-Doorbell-Mute Module)

(This is an optional feature)

The back panel of the XOi has a 3.5mm non-shorting stereo connector input labeled "Mute". This is designed to be used with the AMC PDM1 Phone-Doorbell-Mute module. When the PDM1 is connected, the system will temporarily mute when the phone or doorbell rings.



Front Rear

AMC PDM1 (Phone-Doorbell-Mute Module)

1,2 Doorbell (This is an optional feature)

The back of PDM1 will accept up to two AC or DC voltages from two different doorbell chimes.

This connection is done with two conductor wire from the terminals on the doorbell chime to the Doorbell A or Doorbell B inputs on the back of the PDM1, Polarity is not important for this connection.

3. RJ-11 Connection

Up to two phone lines can be brought into the RJ-11 connection on the back.

The voltage from the phone ringer will trigger the XOi System to mute.

SPECIFICATIONS

Total Zones . . . . . 4 Zones
Zone 1~4 with Speaker Outputs . . . . . 15Wrms x 2
Sources . . . . . 4 Local / 4 Remote Mixed Sources
Sensitivity 60mV

IR outputs frequencies . . . . . four 38KHz and four 56KHz
IR output level . . . . . 5V p-p
Phone input sensitivity . . . . . AC25V~AC100V 20Hz
Doorbell input sensitivity . . . . . AC/DC 3~12V

PHYSICAL
Dimensions (W x H x D) . . . . . W 430.0mm x H 53.3mm x D 338.5mm
Net weight 5.0Kgs
Shipping weight (4 pieces) 34.0Kgs
Power consumption 120W

Weltronics Corp. reserved the right to improve its products at any time. Specifications are subject to change without notice.

SAFETY INSTRUCTION

1. READ INSTRUCTIONS

All the safety and operating instructions should be read before the appliance is operated.

2. RETAIN INSTRUCTIONS

The safety and operating instructions should be retained for future reference.

3. HEED WARNINGS

All warnings on the appliance and in the operating instructions should be adhered to.

4. FOLLOW INSTRUCTIONS

All operating and use instructions should be followed.

5. WATER AND MOISTURE

The appliance should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

6. CARTS AND STANDS

The appliance should be used only with a cart or stand that is recommended by the manufacturer.

6A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. WALL OR CEILING MOUNTING

This equipment is not designed for use mounted on a wall or a ceiling.

8. VENTILATION

The appliance should be situated so that its location or position does not interfere with its proper ventilation. For example, the appliance should not be situated on a bed, sofa, rug, or similar surface that may block the ventilation openings, or placed in a built-in installation, such as bookcase or cabinet that may impede the flow of air through the ventilation openings.

9. HEAT

The appliance should be situated away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

10. POWER SOURCES

The appliance should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

11. POWER-CORD PROTECTION

Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance

12. CLEANING

The appliance should be cleaned only as recommended by the manufacturer.

13. NON USE PERIODS

The power cord of the appliance should be unplugged from the outlet when left unused for a long period of time.

14. OBJECT AND LIQUID ENTRY

Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.

15. SERVICING

The user should not attempt to service the appliance beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

16. DAMAGE REQUIRING SERVICE

The appliance should be serviced by qualified service personnel when:

a) The power-supply cord or the plug has been damaged; or
b) Objects have fallen, or liquid has been spilled into the appliance; or
c) The appliance has been exposed to rain; or
d) The appliance does not appear to operate normally or exhibits a marked change in performance; or
e) The appliance has been dropped, or the enclosure is damaged.

17. POWER LINES
(APPLIES TO TUNER AND RECEIVERS ONLY)

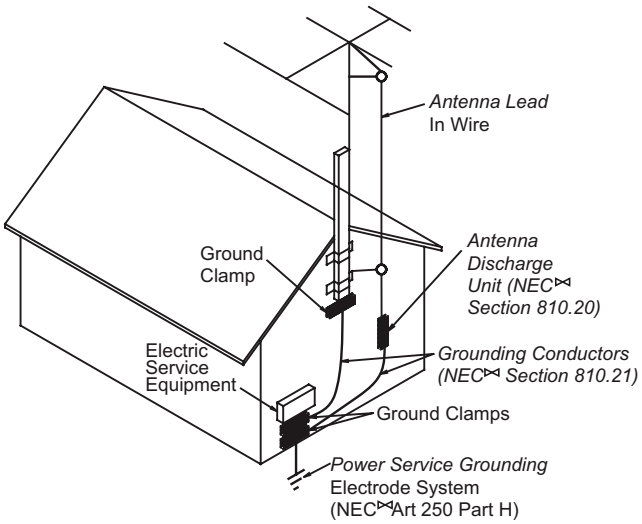
An outdoor antenna should be located away from power lines.

18. OUTDOOR ANTENNA GROUNDING
(APPLIES TO TUNER AND RECEIVERS ONLY)

If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges.
Section 810 of the National Electrical Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.

a) Use No. 10 AWG (5.3 mm^2) copper, No. 8 AWG (8.4 mm^2) aluminum, No. 17 AWG (1.0 mm^2) copper-clad steel or bronze wire, or larger, as a ground wire.
b) Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4-6 feet (1.22-1.83 m) apart.
c) Mount antenna discharge unit as close as possible to where lead-in enters house.
d) Use jumper wire not smaller than No.6 AWG (13.3 mm^2) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

Antenna Grounding According to
the National Electrical Code



⋈ National Electrical Code
Available from Library, book stores, or National Fire Protection Association (Batterymarch Park, Quincy. MA 02269).

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